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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/698,314	10/27/2000	David Carrel	4906.P012	6295

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EXAMINER

HAN, CLEMENCE S

ART UNIT PAPER NUMBER

2665

DATE MAILED: 09/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	09/698,314		CARREL, DAVID	
	<b>Examiner</b>		<b>Art Unit</b>	
	Clemence Han		2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,5-19 and 23-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,5-19 and 23-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claim 1, 5-19 and 23-34 are rejected under 35 U.S.C. 102(e) as being anticipated by Rao et al. (US Patent 6,850,531).

Regarding claim 1 and 19, Rao teaches a method comprising: receiving a number of Internet Protocol (IP) packets on a real circuit and a number of virtual circuits, wherein the number of virtual circuits are within the real circuit such that the number of Internet Protocol (IP) packets on the real circuit have an IP over Ethernet encapsulation and the number of Internet Protocol (IP) packets on the number of virtual circuits have a Point-to-Point over Ethernet encapsulation (Column 24 Line 30-39); deencapsulating the number of Internet Protocol (IP) packets having the IP over Ethernet encapsulation (Column 6 Line 61-62); deencapsulating the number of Internet Protocol (IP) packets having the Point-to-Point over Ethernet encapsulation (Column 6 Line 61-62); and forwarding the number of Internet Protocol (IP) packets having the IP over Ethernet encapsulation and the Point-to-Point over Ethernet encapsulation based on an address stored in the number of Internet Protocol (IP) packets (Column 12 Line 6-15).

Regarding claim 5 and 23, Rao teaches a method comprising: receiving a number of Internet Protocol (IP) packets over Ethernet on a real circuit, each IP packet over Ethernet having an Ethernet header and an IP address (Column 24 Line 30-39); removing the Ethernet header from the number of IP packets (Column 6 Line 61-62); receiving a number of IP packets within a Point-to-Point Protocol (PPP) over Ethernet on at least one virtual circuit, wherein each of the number of IP packets within the PPP over Ethernet includes a PPP header, a PPP over Ethernet (PPPoE) header, an Ethernet header and an IP address, wherein the at least one virtual circuit runs within the real circuit (Column 24 Line 30-39); removing the PPP header and the PPPoE header from the number of IP packets within the PPP over Ethernet (Column 6 Line 61-62); removing the Ethernet header from the number of IP packets within the PPP over Ethernet (Column 6 Line 61-62); and forwarding the number of IP packets over Ethernet and the number of IP packets within PPP over Ethernet based on the IP address (Column 12 Line 6-15).

Regarding claim 6, 11, 24 and 29, Rao teaches the number of IP packets over Ethernet and the number of IP packets within the PPP over Ethernet encapsulated in an Asynchronous Transfer Mode (ATM) protocol layer (Column 24 Line 30-39).

Regarding claim 7, 12, 25 and 30, Rao teaches removing the ATM protocol layer from the number of IP packets over Ethernet and the number of IP packets within the PPP over Ethernet (see Figure 28 and Column 6 Line 61-62).

Regarding claim 8, 13, 17, 26 and 31, Rao teaches calculating the number of IP packets within the PPP over Ethernet that are being received from the at least one virtual circuit (Column 22 Line 4-7).

Regarding claim 9, 14, 18, 27 and 32, Rao teaches performing rate limiting on the at least one virtual circuit based on the number of calculated IP packets within the PPP over Ethernet (Column 21 Line 53-56).

Regarding claim 10 and 28, Rao teaches a method comprising: receiving a number of different data packets over Ethernet on both a real circuit and a number of virtual circuits running within the real circuit (Column 24 Line 30-39); recursively performing the following for each of the number of different data packets: upon determining that a received data packet is an Internet Protocol (IP) packet over Ethernet on the real circuit (Column 11 Line 39-41), removing an Ethernet header from the received data packet (Column 6 Line 61-62) and forwarding the IP packet based on an IP address stored in the IP packet (Column 12 Line 6-15); and upon determining that a received data packet is an IP packet within a Point-to-Point Protocol (PPP) over Ethernet on one of the number of

virtual circuits (Column 11 Line 39-41), removing an Ethernet header, a PPP header and a PPP over Ethernet (PPPoE) header from the data packet (Column 6 Line 61-62) and forwarding the IP packet based on an IP address stored in the IP packet (Column 12 Line 6-15).

Regarding claim 15, Rao teaches a network element 10, 14 comprising: a number of input/output (I/O) cards (Figure 2) coupled to a number of real circuits, wherein each of the number of real circuits include at least one virtual circuit, the number of I/O cards to receive a number of Internet Protocol (IP) packets over Ethernet having an IP over Ethernet encapsulation on the real circuit, to receive a number of IP packets within a Point-to-Point Protocol (PPP) over Ethernet encapsulation on the at least one virtual circuit (Column 24 Line 30-39), to deencapsulate the number Internet Protocol (IP) packets having the IP over Ethernet encapsulation (Column 6 Line 61-62) and to deencapsulate the number of Internet Protocol (IP) packets having the Point-to-Point Protocol over Ethernet encapsulation (Column 6 Line 61-62); and a forwarding card (Figure 4) having an IP address table 90, the forwarding card to receive the number of IP packets from the number of I/O cards and to forward the IP packets based on the IP address stored in the IP packet and the IP address table (Column 12 Line 6-15).

Regarding claim 16, Rao teaches a control card 26 having a database of configuration information, the configuration information used to configure the forwarding card and the number of I/O cards (Column 7 Line 3-16).

Regarding claim 33, Rao teaches a system comprising: a physical transmission line (Column 5 Line 8-10); and a network element 10, 14 coupled to the physical transmission line configured to, receive a number of Internet Protocol (IP) packets on a real circuit and a number of virtual circuits, wherein the real circuit is within the physical transmission line, the number of virtual circuits are within the real circuit such that the number of Internet Protocol (IP) packets on the real circuit have an IP over Ethernet encapsulation and the number of Internet Protocol (IP) packets on the number of virtual circuits have a Point-to-Point over Ethernet encapsulation (Column 24 Line 30-39); deencapsulate the number of Internet Protocol (IP) packets having the IP over Ethernet encapsulation (Column 6 Line 61-62); deencapsulate the number of Internet Protocol (IP) packets having the Point-to-Point over Ethernet encapsulation (Column 6 Line 61-62); and forwarding the each of the deencapsulated Internet Protocol (IP) packets based on an IP address stored in it (Column 12 Line 6-15).

Regarding claim 34, Rao teaches the physical transmission line is one of a plurality of digital subscriber lines (DSL) coupled to the network element (Column 24 Line 52-54).

### ***Response to Arguments***

3. Applicant's arguments filed on June 17, 2005 have been fully considered but they are not persuasive.

In response to pages 9-11, the applicant argues that Rao does not teach applicant's claims, in particular, Rao discloses only processing one protocol at a time on a port during a given connection and forwarding packets received on that port using the matching one of either a PPP or IP forwarding application (but not both). However, the claims do not have the limitation of processing both protocols at the same time.

Therefore, the examiner contends that, as long as Rao teaches processing both PPP and IP protocols, Rao teaches the limitations of the independent claims.

### ***Conclusion***

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is



filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clemence Han whose telephone number is (571) 272-3158. The examiner can normally be reached on Monday-Thursday 7 - 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

C. H.

Clemence Han  
Examiner  
Art Unit 2665



STEVEN NGUY  
PRIMARY EXAMINER